BEOLAB 150, TYPE 1721, 1722, 1723, 1724, 1725

INDHOLD

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DIAGRAMFORKLARING

På diagrammet er der angivet typenumre på transistorer og IC'er i de tilfælde hvor typenummeret er entydigt for komponenters placering i kredsløbet – f.eks. TR20/BC 557B

Hvis positionsnummeret er efterfulgt af en stjerne **skal** reservedelsnummeret benyttes, da denne komponent er specielt udvalgt – f.eks. TR102*.

EXPLANATION OF DIAGRAM

Type numbers of transistors and IC's have been indicated on the diagram in those cases where the type number is unambiguous for the position of the component in a circuitry – e.g. TR20/BC 557B.

If the position number is followed by an asterisk the spare part number **must be used** because this component has been expecially selected – e.g. TR102*.

Koordinatsystem

De største printplader er forsynet med et koordinatsystem. Komponenterne på disse printplader er på diagrammet forsynet med en koordinatbetegnelse, som fortæller i hvilket felt på printpladen de er placeret (mindre skrifttype end positionsnummeret – f.eks. B3).

System of Co-ordinates

The largest PC-boards have been provided with a co-ordinate system. The components on these PC-boards are provided with a grid reference on the diagram indicating in what grid they are positioned on the PC-board (smaller typing than position numbers – e.g. B3).

Ledningsforbindelser

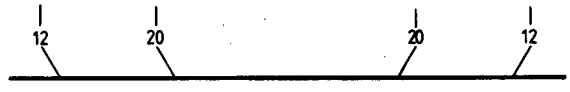
Ledningsforbindelser på diagrammet er samlet i »bundter«. De enkelte ledninger er forsynet med koder, der fortæller hvortil de går.

Wiring Connections

The wiring connections on the diagram are assembled in »bundles«. The individual wires are coded to indicate to where they are leading.

INTERN FORBINDELSE
PÅ EN DIAGRAMSIDE

INTERNAL CONNECTION
ON ONE DIAGRAM PAGE



Interne forbindelser på en diagramside angives med et tal. Knækket på ledningen viser i hvilken retning den anden ende af ledningen findes.

Internal connections on a diagram page are indicated by a number. The bend of the wire indicates in which direction the other end of the wire may be found.

4-48

Forsyningsspændinger
En pil og spændingen viser, hvor forsyningsspændingerne går ind i et print.

Eksempel: (7 CON.) f.eks. ved siden af forsyningsspændingen angiver det antal stedet, spændingen går ind på denne diagramside.

Supply Voltage
An arrow and the voltage show where the supply voltages are fed to a PCB.

Example: (7 CON.) next to the supply voltage indicates the number of places where to find the voltages in this diagram.

Symbol for sikkerhedskomponenter

Ved udskiftning af komponenter med dette symbol skal der anvends komponenter med samme reservedelsnummer. Den nye komponent skal monteres på samme måde som den udskiftede.

Symbol for Safety Components

When replacing components with this symbol components with identical part numbers are to be used. The new component must be fitted in the same way as the one replaced.

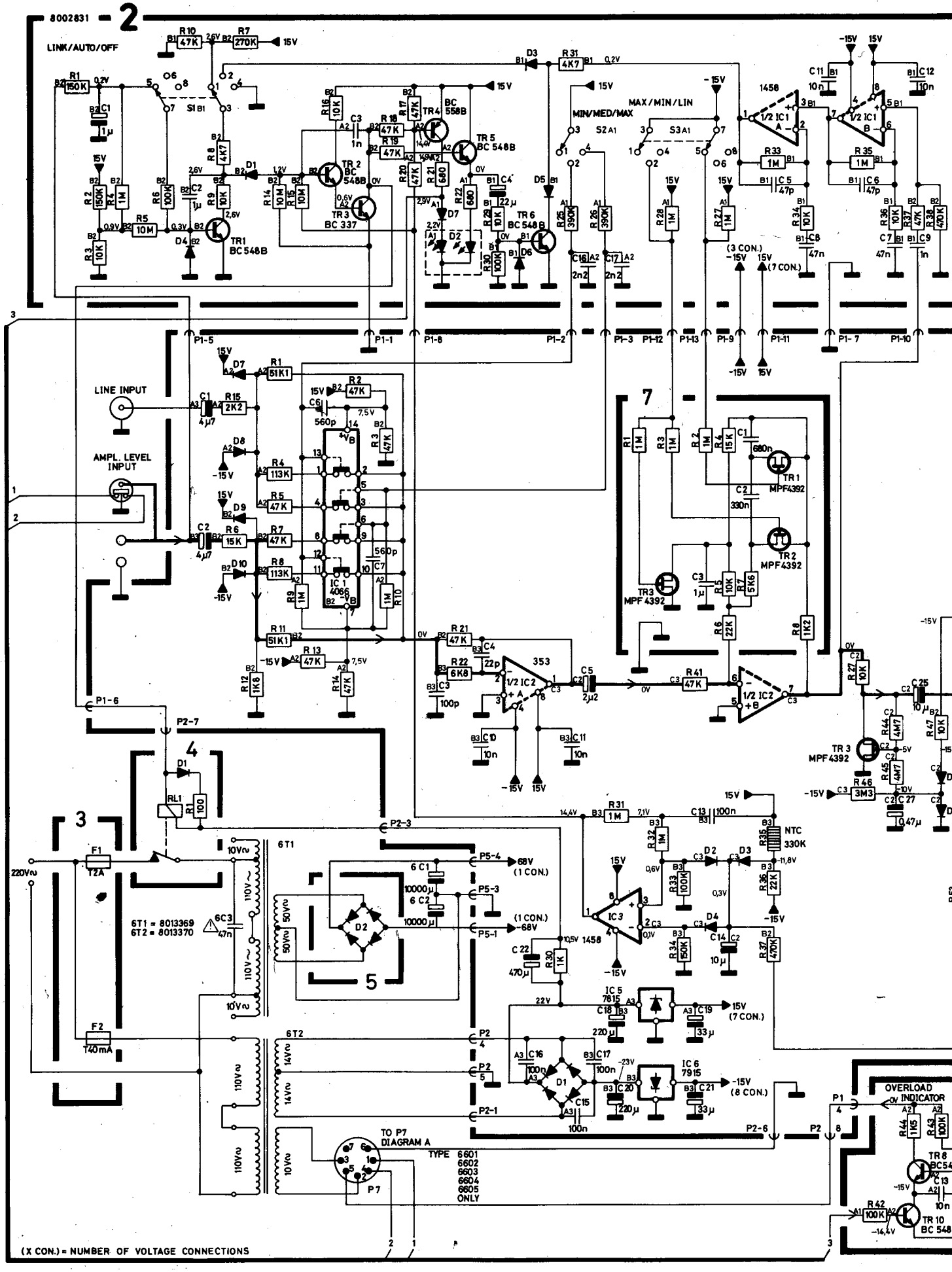
MÅLEBETINGELSER
Alle DC spændinger er målt i forhold til stel, med voltmeter med en indgangsmodstand på 10 Mohm.

Spændingerne er målt uden signaltilføring.

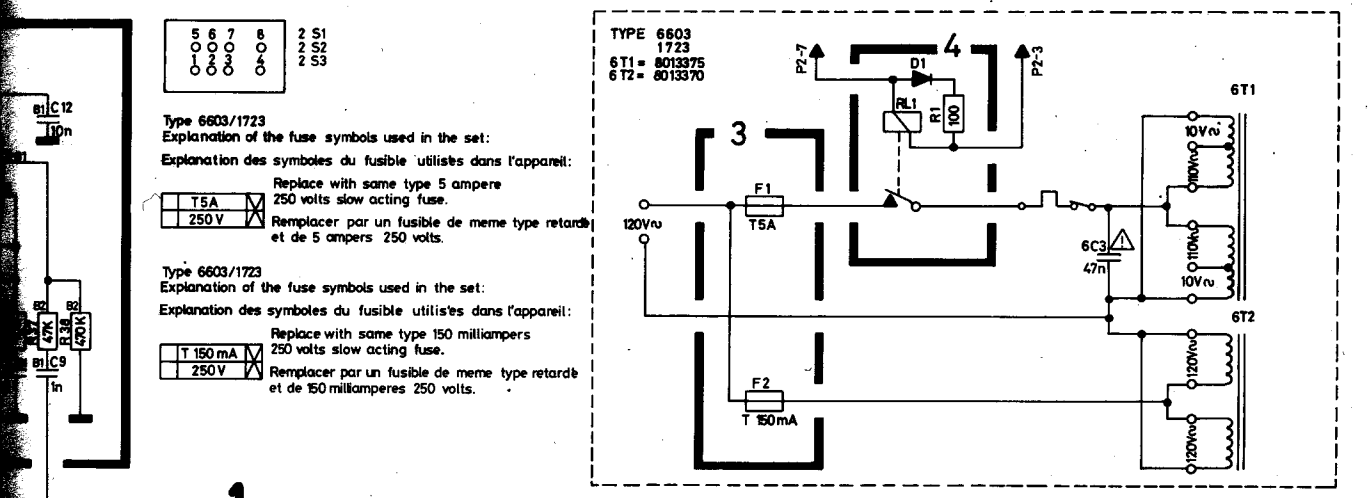
MEASURING CONDITIONS
All DC voltages have been measured in relation to ground with voltmeter with an input resistance of 10 Mohms.

The voltages have been measured without any supply of signal.

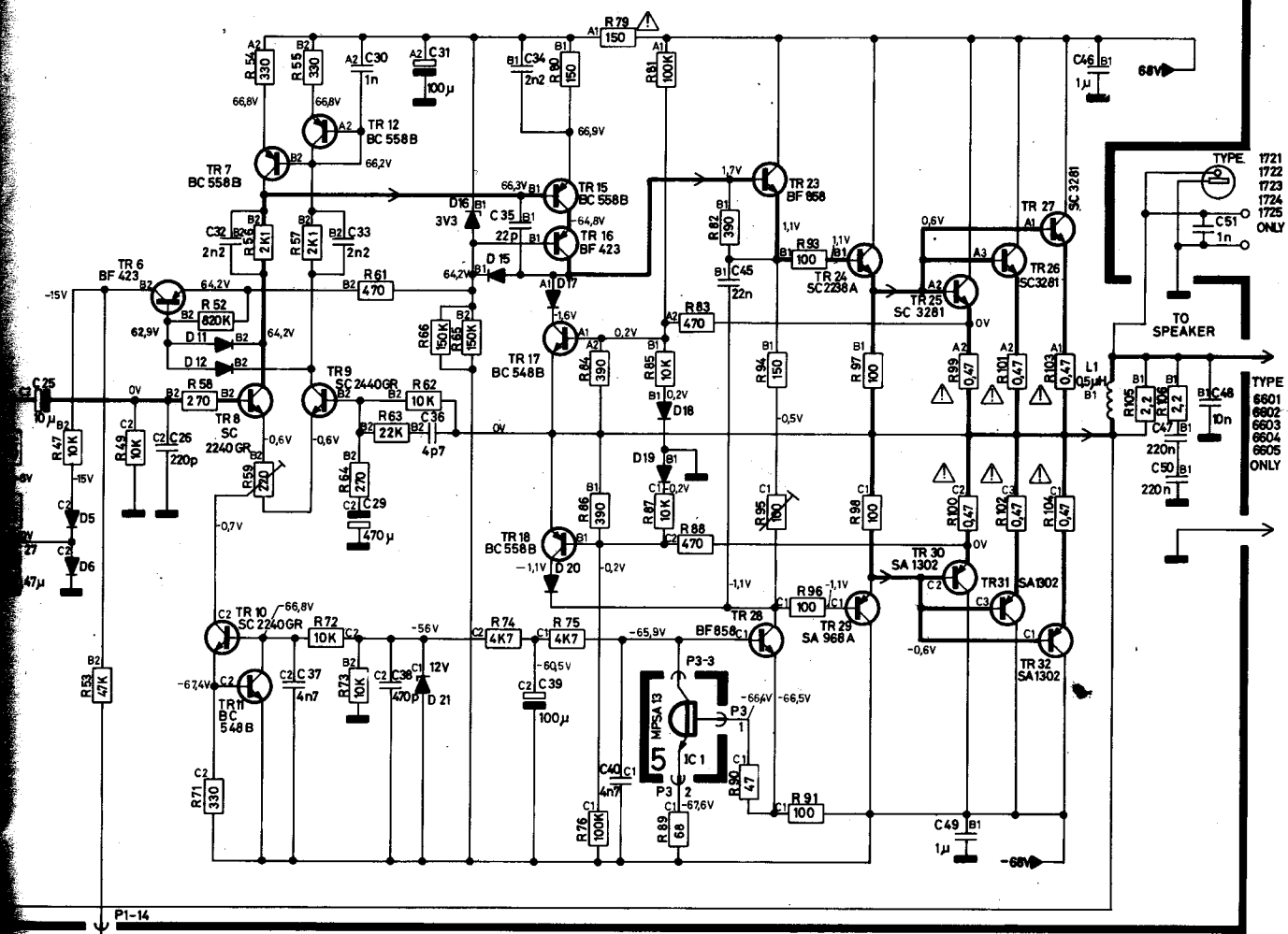
DIAGRAM


8002631 - 2
LINK/AUTO/OFF
MIN/MED/MAX
MAX/MIN/LIN
LINE INPUT
AMPL. LEVEL INPUT
TR1 BC548B
TR2 BC548B
TR3 BC 337
TR4 BC 558B
TR5 BC 548B
TR6 BC 548B
IC1 4066
IC2 353
IC3 1458
IC5 7815
IC6 7915
TR1 MPF4392
TR2 MPF4392
TR3 MPF 4392
6T1 = 8013369
6T2 = 8013370
TO P7 DIAGRAM A
TYPE 6601 6602 6603 6604 6605 ONLY
OVERLOAD INDICATOR
(X CON.) = NUMBER OF VOLTAGE CONNECTIONS

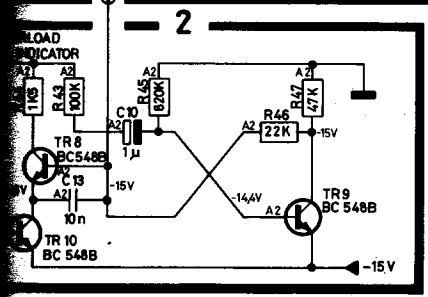
Bang&Olufsen



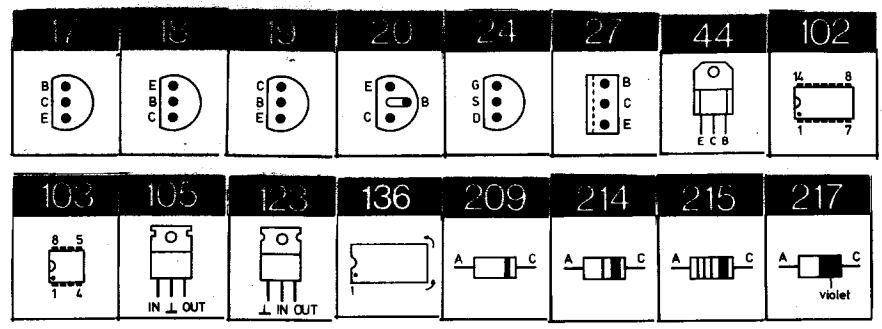
8002915 — 1



2



SEMI CONDUCTORS



Transistors

1TR3	*△8320396	24	MPF 4392
		24	2N 4392
		24	2N 5639
1TR6	8320454	17	BF 423
1TR7	8320152	20	BC 212B/BK
		17	BC 212BL
		20	BC 251B
		18	BC 307B
		20	BC 557B
		27	2SA 844
1TR8-1TR10	8320641		SC 2240 GR
1TR11	8320108	20	BC 172B
		20	BC 183B/BK
		17	BC 183BL
		20	BC 238B
		20	BC 548B
1TR12 1TR15	8320152	20	BC 212B/BK
		17	BC 212BL
		20	BC 251B
		18	BC 307B
		20	BC 557B
		27	2SA 844
1TR16	8320454	17	BF 423
1TR17	8320108	20	BC 172B
		20	BC 183B/BK
		17	BC 183BL
		20	BC 238B
		20	BC 548B
1TR18	8320152	20	BC 212B/BK
		17	BC 212BL
		20	BC 251B
		18	BC 307B
		20	BC 557B
		27	2SA 844

1TR23	8320646	44	BF 858
1TR24	8320643		2SC 2238A
1TR25-1TR27	8320645		2SC 3281
1TR28	8320646	44	BF 858
1TR29	8320642		2SA 968A
1TR30-1TR32	8320644		2SA 1302
2TR1	8320108	20	BC 172B
2TR2		20	BC 183B/BK
		17	BC 183BL
		20	BC 238B
		20	BC 548B
2TR3	8320595	20	BC 337-40
2TR4	8320152	20	BC 212B/BK
		17	BC 212BL
		20	BC 251B
		18	BC 307B
		20	BC 557B
		27	2SA 844
2TR5	8320108	20	BC 172B
2TR6		20	BC 183B/BK
2TR8-		17	BC 183BL
2TR10		20	BC 238B
		20	BC 548B
7TR1-	*△8320396	24	MPF 4392
7TR3		24	2N 4392
		24	2N 5639

IC's

1IC1	△8340202	**102**	CD 4066 BCN
		102	HEF 4066 BP
		102	MC 14066 BCP
		102	MSM 4066 RS
1IC2	8340763	**136**	LF353-TL072
1IC3	8340048	**103**	MC 1458 CP1
		103	MC 1458 N
		103	MC 1458 P
		103	SFC 2458 DC
1IC5	8340064	**105**	UA 7815
		105	UA 7815 UC
		105	LM 340 T-15
1IC6	8340240	**123**	LM 320 T-15
		123	MC 7915 CT
		123	UA 7915 UC
2IC1	8340048	**103**	MC 1458 CP1
		103	MC 1458 N
		103	MC 1458 P
		103	SFC 2458 DC
5IC1	8340054	**19**	MPS A13
		19	TPS A13

Diodes

1D1	8300466		B125 C1500
1D2-	8300058	**217**	SFD 184
1D12		**209**	1N 4148
		215	1N 4148
1D15	8300409	**214**	BAV 20-25
1D16	8300541		Z 3V3
1D17-	8300058	**217**	SFD 184
1D20		**209**	1N 4148
		215	1N 4148
1D21	8300407	**209**	BZX79B 12
		209	BZX83B 12
		209	ZPD 12V
2D1	8300058	**217**	SFD 184
2D3-		**209**	1N 4148
2D7		**215**	1N 4148
4D1	8300058	**217**	SFD 184
		209	1N 4148
		215	1N 4148
5D2	8300497		KBU 6D

△ betyder at statisk elektricitet kan ødelægge komponenten.
△ indicates that static electricity may destroy the component.
△ bedeutet, daß statische Elektrizität die Komponente zerstören kann.
△ signigi que électricité statique peut detruire le composant.

* Speciel udvalgt eller bearbejdet eksemplar.
* Specially selected or adapted sample.
* Speziell ausgewähltes und bearbeitets Exemplar.

LIST OF ELECTRICAL PARTS

Resistors not mentioned are standard resistors

Standard resistors:
Resistors 5% 1/2 W

	X1	X10	X100	X1K	X10K	X100K	X1M	X10M
1.0		5011000	5011013	5011028	5011044	5010313	5011069	5011083
1.2	5011406	5011001	5011014	5011030	5011045	5011058	5010421	
1.5	5010727	5011002	5011015	5011031	5011046	5011059	5011071	
1.8	5010857	5010787	5011016	5011033	5011047		5011072	
2.2	5011335	5010708	5010815	5011034	5011048	5011061	5011074	
2.7		5010803	5011018	5010055	5011049	5011062	5011075	
3.3	5010255	5011007	5011019	5011037		5011063	5010381	
3.9		5010782	5011021	5010700	5011051		5010392	
4.7	5010765	5011009	5011022	5010035	5010036	5011065	5011078	
5.6		5011010	5011023	5011041		5011066	5011079	
6.8	5010874	5011011	5011024	5011042	5010810	5011067	5011080	
8.2		5011012	5011026	5011043	5010038	5011068	5011081	

Resistors 5% 1/4 W

	X1	X10	X100	X1K	X10K	X100K	X1M	X10M
1.0	5010592	5010506	5010065	5010040	5010059	5010049	5010054	5010638
1.2		5010595	5010128	5010153	5010046	5010047	5010665	
1.5		5010468	5010057	5010247	5010053	5010063	5010093	
1.8		5010822	5010362	5010066	5010135	5010072	5010791	
2.2	5010682	5010448	5010092	5010064	5010079	5010120	5010245	
2.7	5010925	5010403	5010000	5010298	5010141	5010083	5010431	
3.3		5010253	5010044	5010076	5010075	5010117	5010848	
3.9		5010622	5010070	5010069	5010060	5010073	5010714	
4.7	5010888	5010411	5010058	5010048	5010045	5010077		
5.6	5010706	5010151	5010067	5010041	5010061	5010071	5010658	
6.8	5010904	5010039	5010144	5010052	5010062	5010074		
8.2	5010880	5010056	5010068	5010154	5010091	5010505		

Amplifier, 8002915, PCB 1

R1	5020363	51.1 kΩ 1% 1/4W	R79	5020633	150 Ω 5% 0.35W
R4	5020126	113 kΩ 1% 1/4W	R95	5370341	100 Ω 20% 0.1W
R8	5020126	113 kΩ 1% 1/4W	R99	5100203	0.47 Ω 10% 2W
R11	5020363	51.1 kΩ 1% 1/4W	R100	5100203	0.47 Ω 10% 2W
R35	5220036	330 kΩ 10% 1/2W	R101	5100203	0.47 Ω 10% 2W
R56	5020200	2.1 kΩ 1% 1/4W	R102	5100203	0.47 Ω 10% 2W
R57	5020200	2.1 kΩ 1% 1/4W	R103	5100203	0.47 Ω 10% 2W
R59	5370351	220 Ω 20% 0.1W	R104	5100203	0.47 Ω 10% 2W
R73	5020127	10 kΩ 5% 1W			

C1	4200477	4.7 µF 20% 25V	C26	4100234	220 pF 5% 63V
C2	4200477	4.7 µF 20% 25V	C27	4200476	0.47 µF 20% 50V
C3	4100232	100 pF 5% 63V	C29	4200665	470 µF 20% 6.3V
C4	4000136	22 pF 5% 63V	C30	4010027	1 nF 10% 63V
C5	4200423	2.2 µF 20% 50V	C31	4200652	100 µF 20% 100V
C6	4010064	560 pF 10% 63V	C32	4010061	2.2 nF 10% 63V
C7	4010064	560 pF 10% 63V	C33	4010061	2.2 nF 10% 63V
C10	4010041	10 nF -20+80% 40V	C34	4010061	2.2 nF 10% 63V
C11	4010041	10 nF -20+80% 40V	C35	4003059	22 pF 5% 500V
C13	4130179	100 nF 20% 63V	C36	4000020	4.7 pF 0.25 pF 63V
C14	4200431	10 µF 20% 16V	C37	4010063	4.7 nF 10% 63V
C15	4130179	100 nF 20% 63V	C38	4010024	470 pF 10% 63V
C16	4130179	100 nF 20% 63V	C39	4200478	100 µF 20% 10V
C17	4130179	100 nF 20% 63V	C40	4010063	4.7 nF 10% 63V
C18	4200311	220 µF -10+100% 40V	C45	4130195	22 nF 5% 250V
C19	4200509	33 µF 20% 25V	C46	4130155	1 µF 10% 100V
C20	4200311	220 µF -20+100% 40V	C47	4130308	220 nF 10% 63V
C21	4200509	33 µF 20% 25V	C48	4012002	10 nF -20+50% 400V
C22	4200704	470 µF 20% 25V	C49	4130155	1 µF 10% 100V
C25	4200431	10 µF 20% 16V	C50	4130308	220 nF 10% 63V

P1	7220143	Plug 14 pol.	P3	7220313	Plug 3 pol.
P2	7220203	Plug 10/9 pol.	P5	7220196	Plug 4/3 pol.

L1	6850114	Coil 0.5 µH

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Control, 8002831, PCB 2

C1	4200333	1 µF -10+50% 63V	C9	4010027	1 nF 10% 63V
C2	4130310	1 µF 10% 50V	C10	4200333	1 µF -10+50% 63V
C3	4010027	1 nF 10% 63V	C11	4010041	10 nF -20+80% 40V
C4	4200016	22 µF -10+50% 25V	C12	4010041	10 nF -20+80% 40V
C5	4000057	47 pF 5% 63V	C13	4010041	10 nF -20+80% 40V
C6	4000057	47 pF 5% 63V	C16	4010061	2.2 nF 10% 63V
C7	4130223	47 nF 10% 63V	C17	4010061	2.2 nF 10% 63V
C8	4130223	47 nF 10% 63V			

S1	7400350	Switch	S3	7400350	Switch
S2	7400350	Switch			

Fuses, 6271040, PCB 3 type 6601/02
Fuses, 6270343, PCB 3 type 6605

F1	6600009	Fuse 2A 250V
F2	6600070	Fuse 40MA 250V
	7200052	Fuse holder

Fuses, 6270342, PCB 3 type 6603/04

F1	6600019	Fuse 5A 250V
F2	6600069	Fuse 150MA 250V
	7200052	Fuse holder

Relay, 8002784, PCB 4

RL1	7600069	Relay
	3917109	Damping material

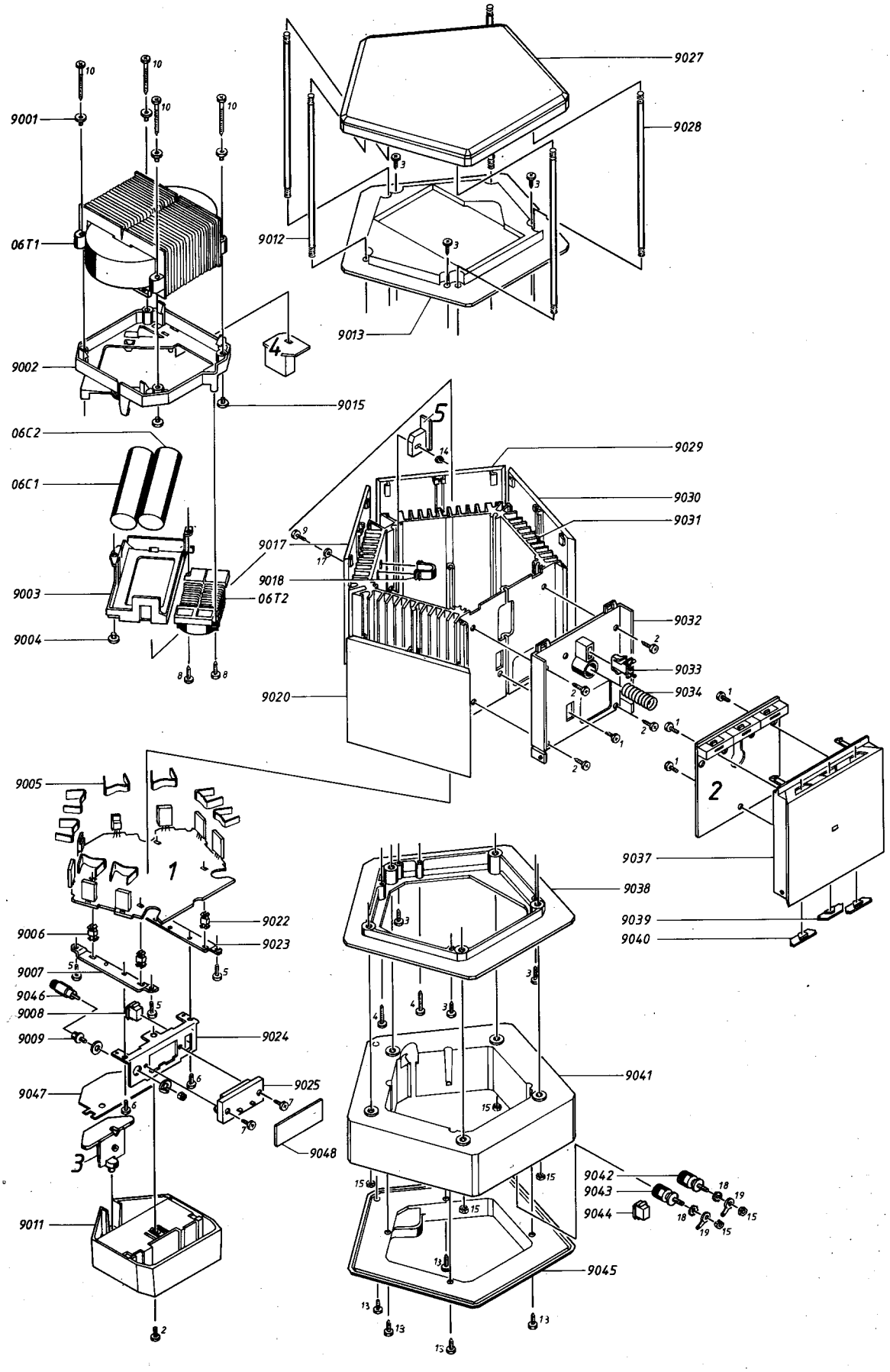
Signal level, 8002916, PCB 7

C1	4130311	680 nF 10% 63V
C2	4130309	330 nF 10% 63V
C3	4130310	1 µF 10% 50V

P1	7220544	Plug 5 pol.

4-53 4-

MEKANISK STYKLISTE
LIST OF MECHANICAL PARTS



9001	2938154	Bøsning	Bushing
9002	3152455	Holder f. elektrolytter	Holder for electrolytes
9003	3164608	Låg f. elektrolytter	Cover for electrolytes
9004	2938154	Bøsning	Bushing
9005	2819157	Bøjle	Clamp
9006	3152063	Holder f. PCB 1	Holder for PCB 1
9007	2542669	Vinkel f. PCB 1	Bracket for PCB 1
	3947202	Skumtape i metermål	Foam tape by the meter
9008	7210521	Stikdåse 4 pol.	Socket 4 pole
9009	7210567	Stikdåse phono	Phono socket
9011	3164627	Dæksel f. stikbrønd	Cover for socket
9012	2076007	Gevindstykke	Threaded piece
9013	3162266	Sammenspændingsstykke	Assembling piece
9015	2938154	Bøsning	Bushing
9017	3164648	Dækplade m. tryk, type 1721	Cover plate with print, type 1721
	3164649	Dækplade m. tryk, type 1722	Cover plate with print, type 1722
	3164650	Dækplade m. tryk, type 1723	Cover plate with print, type 1723
	3164651	Dækplade m. tryk, type 1724	Cover plate with print, type 1724
	3164652	Dækplade m. tryk, type 1725	Cover plate with print, type 1725
9018	3152507	Ledningsholder	Wire holder
9020	3164602	Dækplade	Cover plate
9022	3152063	Holder f. PCB 1	Holder for PCB 1
9023	2542669	Vinkel f. PCB 1	Bracket for PCB 1
	3947202	Skumtape i metermål	Foam tape by the meter
9024	2542668	Vinkel f. stik	Bracket for socket
9025	7210509	Dobbelt stikterminal	Double socket terminal
9027	3458492	Top	Top
9028	2076007	Gevindstykke	Threaded piece
9029	3164603	Dækplade	Cover plate
9030	3164602	Dækplade	Cover plate
9031	2568847	Køleprofil	Heat sink
9032	3452527	Bagstykke, betjening	Rear cover, control
9033	3034066	Lås f. låg	Lock for lid
9034	2812113	Trykfjeder	Pressure spring
9037	3168687	Betjeningspanel	Control panel
9038	3162268	Sammenspændingsstykke	Assembling piece
9039	2776037	Knap omskifter	Switch button
9040	2776037	Knap omskifter	Switch button
9041	3454443	Mellemsektion	Intermediate section
9042	7210595	Bøsning, rød	Bushing, red
9043	7210596	Bøsning, sort	Bushing, black
9044	7211047	Stikdåse 2 pol. DIN	Socket 2 pole DIN
9045	3454444	Bundplade	Bottom plate
9046	7220591	Kortslutningsstik	Short-circuit plug
9047	3302426	Isolationsstykke	Insulation piece
	3947202	Skumtape i metermål, til isolationsstk.	Foam tape by the meter for insulation piece
9048	6141199	PCB for stikterminal	PCB for socket terminal

01 Modul	8002915	PCB forstærker	PCB amplifier

02 Modul	8002831	PCB betjening	PCB control

03 Modul	6271040	PCB sikringer, netledning type 1721/22	PCB fuses, mains lead type 1721/22
	6270342	PCB sikringer, netledning type 1723/24	PCB fuses, mains lead type 1723/24
	6270343	PCB sikringer, netledning type 1725	PCB fuses, mains lead type 1725
	7200052	Sikringsholdere	Fuse holders

04 Modul	8002784	PCB relæ	PCB relay
	3917109	Dæmpemateriale	Damping material

05 Modul	8002832	PCB netdel	PCB power supply unit

06T1	8013369	Transformator, type 1721/22/25	Transformer, type 1721/22/25
	8013375	Transformator, type 1723	Transformer, type 1723
	8013376	Transformator, type 1724	Transformer, type 1724

06T2	8013370	Transformator, type 1721/22/23/25	Transformer, type 1721/22/23/25
	8013377	Transformator, type 1724	Transformer, type 1724
06C1	4200653	10000 µF 20% 80V	10000 µF 20% 80V
06C2	4200653	10000 µF 20% 80V	10000 µF 20% 80V
	3917109	Dæmpemateriale	Damping material

Oversigt skruer, skiver m.m.
Survey of screws, washers etc.

1	2013208	Skrue M 2,9 x 9,5	Screw M 2.9 x 9.5
2	2039027	Skrue AM 3 x 6	Screw AM 3 x 6
3	2015088	Skrue M 3,5 x 16	Screw M 3.5 x 16
4	2015116	Skrue 3,5 x 25	Screw 3.5 x 25
5	2015201	Skrue M 3,5 x 9,5	Screw M 3.5 x 9.5
6	2039026	Skrue AM 3 x 4	Screw AM 3 x 4
7	2039028	Skrue AM 3 x 8	Screw AM 3 x 8
8	2015008	Skrue U 3,5 x 13	Screw U 3.5 x 13
9	2039014	Skrue AM 3 x 20	Screw AM 3 x 20
10	2015115	Skrue M 3,5 x 50	Screw M 3.5 x 50
13	2013017	Skrue M 2,9 x 13	Screw M 2.9 x 13
14	2380011	Møtrik M3	Nut M3
15	2380016	Møtrik M4	Nut M4
17	2624013	Skive	Washer
18	2625003	Stjerneskive	Tooth lock washer
19	7530111	Loddeflig	Solder tag

Ikke viste dele
Parts not shown

3170169	Glimmerskive	Mica washer
6275627	Ledningsbundt m. DIN stik	Wire bundle with DIN plug
3391822	Yderæske	Outer carton
3397597	Skumemballage	Foam packing
3946038	Folie i meter	Foil by the meter

JUSTERINGER

Tomgangsstrøm
Tomgangsstrøm justeres medens forstærkeren er kold og uden signal tilført.

Højttaler må ikke være tilsluttet.

DC millivoltmeter tilsluttes over 1R103/1R104.

1R95 justeres til 30 mV.

Offset
DC voltmeter tilsluttes højttalerudgangen.

1R59 justeres til 0 V.

ADJUSTMENTS

No-load current
Adjust the no-load current while the amplifier is cold and without any supply of signal.

The loudspeakers must not be connected to the amplifier.

Connect the DC millivoltmeter over 1R103/1R104.

Adjust 1R95 to 30 mV.

Offset
Connect the CD voltmeter to the loudspeaker output.

Adjust 1R59 to 0 V.

TECHNICAL SPECIFICATIONS

Power output 20-20,000 Hz IHF	1 x 150 watts/8 ohms
Power output RMS DIN/IEC	1 x 175 watts/8 ohms
Power output music	1 x 225 watts/8 ohms
Total harmonic distortion THD	<0.015%
Intermodulation distortion IHF	<0.02%
Wideband damping factor IHF	150
Dynamic headroom IHF	>1.5 dB/8 ohms
S/N A-weighted 1 W IHF	>78 dB
S/N A-weighted 150 W	>100 dB
LINE input	80 mV/1W, 1V/150 W,
	22 kohms, phono plugs
Speaker input	800 mV/1W, 10 V/150 W, 15 kohms,
	DIN 4-pin or spring loaded contacts
Bass level switch	Linear, +3dB/40 Hz, +6 dB/40 Hz
Sensitivity switch	0 dB, -3 dB, -6 dB
Power supply	1721: 220 V
	1722/1725: 240 V
	1723: 120 V
	1724: 100 V
Power frequency	50-60 Hz
Dimensions W x H x D	5-13 x 25 cm (5-5" x 10")
Weight	7 kg (15.4 lbs)

Subject to change without notice

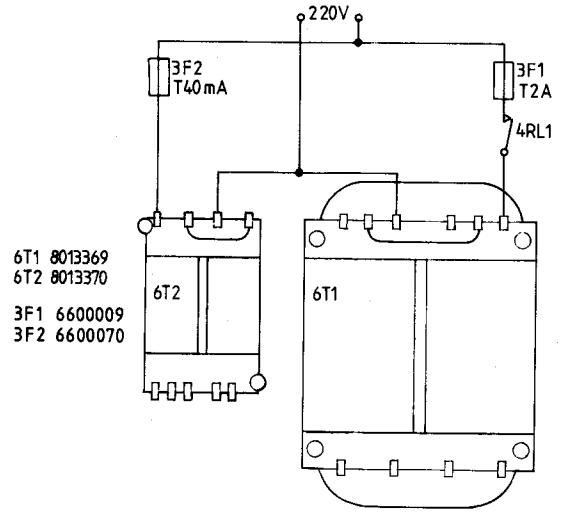
Sensitivity switch	Input for 150 W output	Amplifier for 4 ohms output	Amplifier for 8 ohms output
MAX.	10 V	– 25 W	– 12 W
MED.	14.1 V	25 W – 50 W	12 W – 25 W
MIN.	20 V	50 W – 100 W	25 W – 50 W

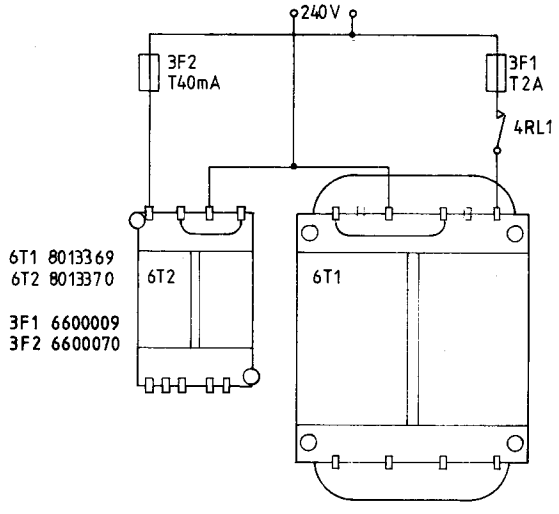
SERVICE TIPS

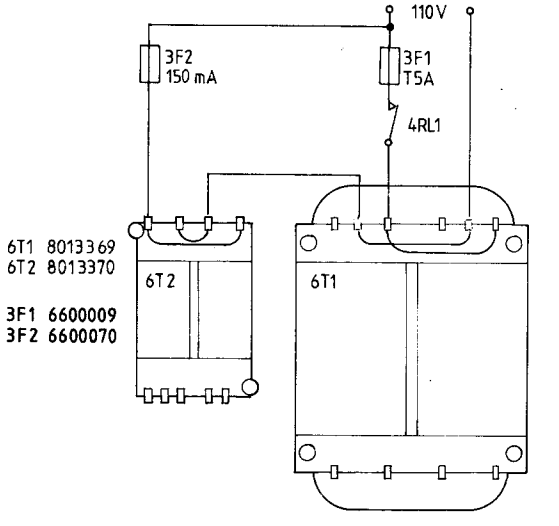
Ledningsmontering på nettransformatorer

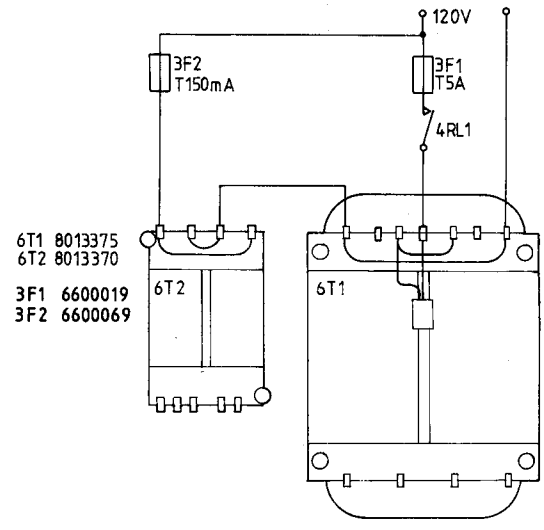
Wiring of Mains Transformers

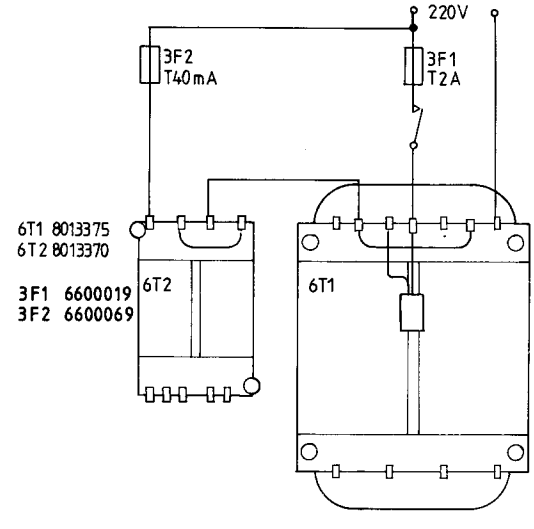
Type 1721
Type 1722
Type 1725

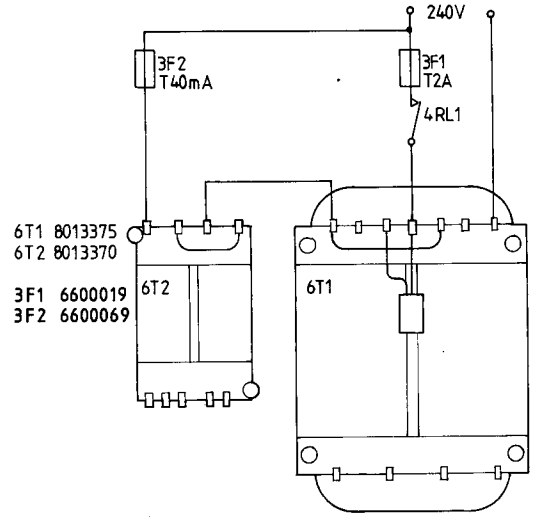


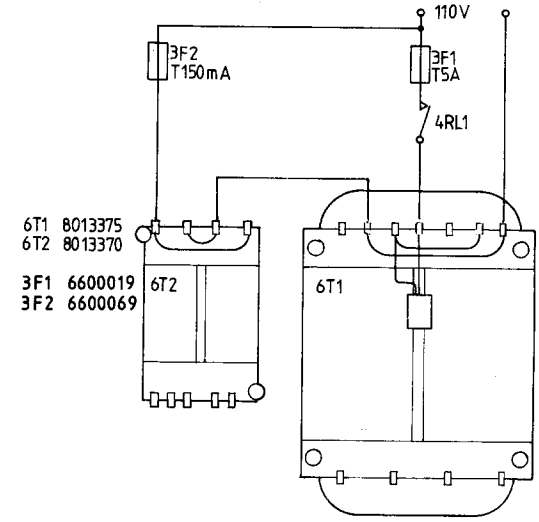




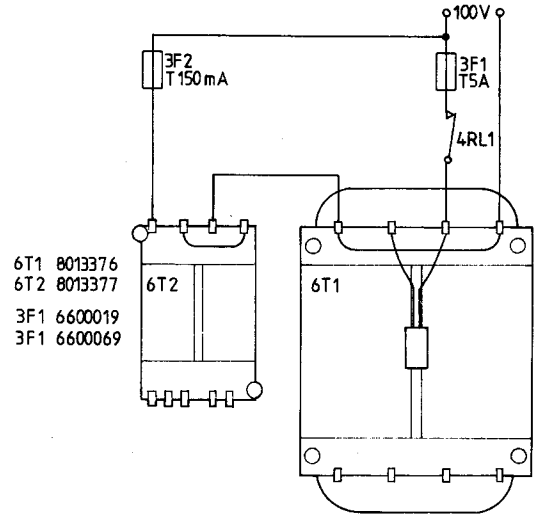

120V
3F2
T150mA
3F1
T5A
4RL1
6T1 8013375
6T2 8013370
3F1 6600019
3F2 6600069
6T2
6T1


220V
3F2
T40mA
3F1
T2A
6T1 8013375
6T2 8013370
3F1 6600019
3F2 6600069
6T2
6T1


240V
3F2
T40mA
3F1
T2A
4RL1
6T1 8013375
6T2 8013370
3F1 6600019
3F2 6600069
6T2
6T1


110V
3F2
T150mA
3F1
T5A
4RL1
6T1 8013375
6T2 8013370
3F1 6600019
3F2 6600069
6T2
6T1

Type 1724


100V
3F2
T150mA
3F1
T5A
4RL1
6T1 8013376
6T2 8013377
3F1 6600019
3F1 6600069
6T2
6T1

ISOLATIONSTEST
Ethvert apparat skal isolationstestes efter at det har været adskilt. Testen udføres når apparatet igen er helt samlet og klar til udlevering til kunden.

Isolationstesten udføres på følgende måde:
De to stikben på netstikket kortsluttes og tilsluttes en af terminalerne på isolationstesteren. Den anden terminal fra isolationstesteren tilsluttes den sorte klembøsning i AMP LEVEL INPUT.

OBS!
For at undgå beskadigelser på apparatet er det vigtigt, at begge terminaler fra isolationstesteren har virkelig god mekanisk kontakt.

Der drejes nu langsomt med spændingsreguleringen på isolationstesteren indtil en spænding på 1,5 - 2 kV er opnået. Her skal den holdes i 1 sekund, derefter drejes der langsomt ned for spændingen igen.

Der må ikke på noget tidspunkt under testen forekomme overslag.

INSULATION TEST
Earch set must be insulation tested after dismantling.The test is to be performed when the set has been reassembled and is ready for delivery to the customer.

Make the insulation test as follows:
Short-circuit the two plug pins of the mains plug and connect one of the terminals of the insulation tester. Connect the other terminal of the insulation tester to the black spring loaded contact marked AMP LEVEL INPUT.

N.B.!
To avoid ruining the set, it is essential that both insulator test terminals are in really good mechanical contact.

Now turn slowly the voltage control of the insulation tester until a voltage of 1.5 - 2 kV is obtained. Hold it there for 1 second, then turn slowly the voltage down again.

At no point during the testing procedure any flash-overs are permissible.